

# Typification of *Elaeocarpus decipiens* (Elaeocarpaceae) and Its New Variety from Taiwan, China

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**ABSTRACT.** In preparing the treatment of the Elaeocarpaceae for the *Flora of China*, lectotypification is indicated for *Elaeocarpus decipiens* Hemsley ex Forbes & Hemsley and further nomenclatural change is required regarding a related taxon from Taiwan. The name *Elaeocarpus lanyuensis* C. E. Chang is invalid because the type was not indicated in the protologue, and the combination *E. sylvestris* var. *lanyuensis* (C. E. Chang) C. E. Chang is therefore illegitimate. *Elaeocarpus decipiens* Hemsley ex Forbes & Hemsley var. *changii* Y. Tang is published as a new variety, replacing these earlier names.

**Key words:** China, Elaeocarpaceae, *Elaeocarpus*, Taiwan.

Among Chinese Elaeocarpaceae, *Elaeocarpus sylvestris* (Loureiro) Poiret, *E. decipiens* Hemsley ex Forbes & Hemsley, and *E. glabripetalus* Merrill are often confused, and the latter two names are often treated as synonyms of the first (e.g., Gagnepain, 1919, 1945; Merrill & Chun, 1935; Metcalf, 1941; Hara, 1951; C. E. Chang, 1977). More recently, Chang Hongta (1979, 1989) treated *E. decipiens*, *E. sylvestris*, and *E. glabripetalus* as three distinct species. However, collections from Taiwan remain unresolved. Although *E. decipiens* was reported from Taiwan, the taxon was a mixture of *E. decipiens* and *E. sylvestris*, as determined from its description, drawing, and specimens cited by Li in 1963. *Elaeocarpus decipiens* was subsequently treated as a synonym of *E. sylvestris* in both editions of the *Flora of Taiwan* (C. E. Chang, 1977, 1993). Based on our examination of exsiccatae from Taiwan (*Suzuki 6129* (IBSC), *Tanaka & Shimida 11142* (IBSC), *Morris s.n.* (IBSC), *Southwest Forest College herbarium no. 4471* (SWFC)), we confirmed that *E. decipiens* does occur in Taiwan. Based on additional study of specimens from mainland China and adjacent areas including Indochina and Japan, *E. sylvestris*, *E. decipiens*, and *E. glabripetalus* were easily distinguished (Tang, 1992) as follows:

KEY TO *ELAEOCARPUS DECIPIENS* AND RELATED SPECIES FROM CHINA, INDOCHINA, AND JAPAN

1a. Branchlets bright brown when dried, glabrous, angular; leaves sessile, with petioles less than

5 mm long, usually greenish yellow when dried; petals glabrous, upper half of each petal divided into 15 segments; fruit 1–1.5 cm diam . . . . .

. . . . . *E. glabripetalus* Merrill

1b. Branchlets black-brown when dried, puberulent or sparsely pilose, not angular; leaf petioles 10–20 mm long, leaves black-brown when dried; petals puberulent on either side, upper half of each petal divided into 10 or 14 to 16 segments; fruit ca. 0.7 or 1.5–2 cm diam.

2a. Leaves usually obovate, papery, lateral veins 4 or 5, with indistinct anastomosing veinlets; petals abaxially puberulent at base, segments 10; stamens 15. . . . . *E. sylvestris* (Loureiro) Poiret

2b. Leaves lanceolate or narrowly oblong, leathery, lateral veins 7 to 9, with prominent anastomosing veinlets, petals adaxially puberulent at base, segments 14 to 16; stamens 25 to 30. . . . .

. . . . . *E. decipiens* Hemsley ex Forbes & Hemsley

3a. Leaf blade 7–13.5 × 2–4 cm, without glands in axils of lateral veins, petiole 1–2 cm; fruit ca. 2 cm diam.; stamens 25 to 30; ovary densely tomentose . . . . .

. . . . . *E. decipiens* var. *decipiens*

3b. Leaf blade 4.5–7 × 1.2–2.5 cm, with glands in axils of lateral veins, petiole less than 1 cm; fruit 0.7–0.8 cm diam.; stamens ca. 20; ovary glabrescent . . . . .

. . . . . *E. decipiens* var. *changii* Y. Tang

In addition, because its leaves look similar to *Elaeocarpus decipiens*, *E. hayatae* Kanehira & Sasaki sometimes was treated as a synonym of *E. decipiens* (H. T. Chang, 1989). *Elaeocarpus hayatae* differs from *E. decipiens* mainly in having 4- or 5-loculed ovaries and fruit (vs. 3-loculed ovaries and 1-loculed fruit in *E. decipiens*).

When describing *Elaeocarpus decipiens*, Forbes and Hemsley (1886) cited three specimens, *Wright s.n.* (from Luchu Archipelago [Ryukyu Islands], Japan), *Reeves s.n.* (from Kwangtung [Guangdong], China), and provisionally *Oldham 54* (from Formosa [Taiwan], China), this last collection cited with a question mark, but they failed to designate a type specimen. Lectotypification is therefore indicated, as supported by Articles 9.2 and 9.9 of the *ICBN (St. Louis Code)* (Greuter et al., 2000). Because Forbes and Hemsley were not sure about *Oldham 54*, this specimen is excluded from lectotypification. Examination of photographs of the first two cited specimens reveals that



*Reeves s.n.* is more appropriately identified as *E. sylvestris*. Consequently, *Wright s.n.* is the only candidate for lectotype among the original syntypes of *E. decipiens*. For *Wright s.n.*, two gatherings, one flowering specimen on the upper portion and one fruiting specimen on the lower portion, appear on the same herbarium sheet. These two gatherings are quite different and were probably made at different times. The handwritten annotation "*E. decipiens* Hemsl." is associated with the fruiting specimen. An additional annotation "cf. *E. photiniaefolius*" may be seen with the flowering specimen. Therefore, only the fruiting specimen represents *E. decipiens*. Because this fruiting specimen represents the only unambiguous material among the cited syntypes for *E. decipiens*, *Wright s.n.* is designated as the lectotype of *E. decipiens*.

***Elaeocarpus decipiens*** Hemsley ex Forbes & Hemsley, J. Linn. Soc. 23: 221. 1886. TYPE: Japan. "Loo-Choo Islands" [Ryukyu Islands], *Wright s.n.* (lectotype, designated here, fruiting specimen at sheet lower right, K not seen, K photo at SZ).

***Elaeocarpus decipiens*** Hemsley ex Forbes & Hemsley var. ***changii*** Y. Tang, var. nov. *Elaeocarpus lanyuensis* C. E. Chang, Quart. J. Chin. Forest. 21: 113, t. 1. 1988, nom. invalid. *E. sylvestris* var. *lanyuensis* (C. E. Chang) C. E. Chang, Flora of Taiwan, ed. 2, 3: 720. 1993, nom. illeg. TYPE: China. Taiwan. Lanyu Island, *C. E. Chang 14930* (holotype, PPI, photo SZ).

Foliis oblongis, firmiter chartaceis usque 4.5–7 cm longis, 1.2–2.5 cm latis, nervis utrinque 6 ad 8, in axillis nervorum glandulis; petalis laciniatis; staminibus circiter 20; ovario glabrescenti; fructibus circiter 15–18 mm longis, 7–8 mm diametro.

The variety *changii* is very similar to *Elaeocarpus decipiens* var. *decipiens*, but differs in having smaller leaf blades 4.5–7 × 1.2–2.5 (vs. 7–13.5 × 2–4) cm, glands in axils of lateral veins, a glabrescent (vs. tomentose) ovary, and smaller fruit, 1.5–1.8 × 0.7–0.8 (vs. 2–3.5 × 1.7–2) cm.

C. E. Chang (1993) considered *Elaeocarpus lanyuensis* C. E. Chang to be similar to *E. sylvestris* and therefore reduced it to a variety of the latter. However, its thickly papery oblong leaves, less than 1 cm petioles, 6 to 8 lateral veins, 14 to 16 petal segments, and ca. 20 stamens indicate that Chang's *E. lanyuensis* is more similar to *E. decipiens*. The photo of the type specimen *Chang 14930* (C. E. Chang, 1993) appears very similar to one of a syntype of *E. decipiens* (*Wright s.n.* [K]) collected from the Ryukyu Islands in Japan.

Because two specimens, *Chang 18289* and *Chang 18372*, were cited for *Elaeocarpus lanyuensis* (C. E. Chang 1988), but without indication of the type in the protologue, the name *E. lanyuensis* C. E. Chang is invalid under the ICBN (*St. Louis Code*), Articles 37.1 and 37.5 (Greuter et al., 2000). In 1993, C. E. Chang reduced this to a variety of *E. sylvestris* (Loureiro) Poiret. Because the name *E. lanyuensis* is not validly published, this later combination *E. sylvestris* var. *lanyuensis* (C. E. Chang) C. E. Chang is also illegitimate.

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